CLEANtips
The Newsletter of TetraTech EM Inc.'s CLEAN Program
Winter 1999

Preparing for Transfer at Centerville Beach

In June 1998, EFA WEST set an ambitious goal for Naval Facility Centerville Beach (NFCB): complete characterization and cleanup at known environmental sites and ultimately close the facility within a 12-month period. To accomplish this, the cleanup team accelerated characterization and cleanup of the facility during the summer and fall of 1998. This work resulted in an anticipated site closure date of March 1999 and expected site transfer and reuse four years ahead of previously identified Navy schedules. The early cleanup and transfer will result in a cost avoidance of approximately $5 million compared to previous Navy estimates.

The accelerated approach at NFCB was made possible by active cooperation among the Navy, regulatory agencies, contractors, and the public to identify ways to complete necessary environmental activities and expedite the closing of each site in an efficient and effective manner. The result was a back-to-front approach: given the ultimate goal of site closure, the Navy worked with the regulators to map the needed characterization and cleanup criteria needed to close out each site. The NFCB team also shortened the characterization process and expedited field activities by meeting an aggressive field schedule throughout the summer months. Local subcontractors were used for a majority of the cleanup work and the team utilized an alternative disposal method for much of the Skeet Range lead-contaminated soils, resulting in a significant cost avoidance (approximately $1 million).

To meet the scheduled site closure dates, the NFCB cleanup team prepared draft and final closure documents in less than 5 weeks. The submittal of high-quality closure documentation has assured the successful early transfer of the facility. The team also identified innovative ways to approach the closing of the IR sites at NFCB by using the Regional Water Quality Control Board's monthly meetings to meet public participation requirements and prepare the site closure documentation. The Water Board's site closure documentation will allow the Navy to initiate actions with the GSA on the transfer process while awaiting concurrence from the DTSC. For more information contact Rob White at (916) 853-4504.

The early cleanup and transfer of Navel Facility Centerville Beach will result in a cost avoidance of approximately $5 million.

Also in this Issue:

Innovative Technologies Compendium Available

A desktop compendium of innovative technologies has been developed under CLEAN to facilitate the selection of innovative, cost-effective technology solutions for implementing challenging Installation

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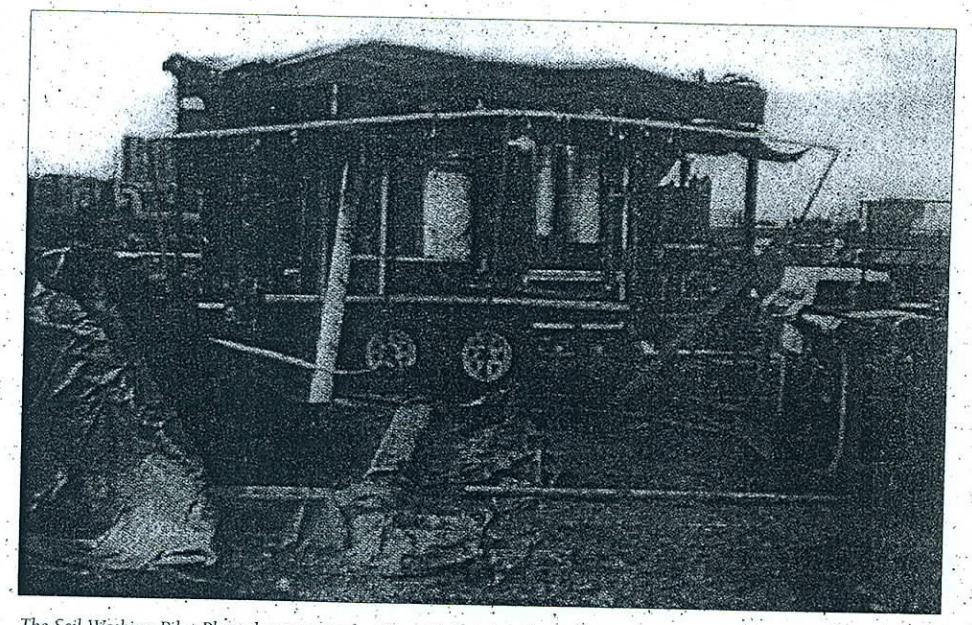
Compendium *continued from p. 1*

Restoration site cleanups. The compendium makes it easy to review innovative technology alternatives that have been used or demonstrated at EFA WEST installations. It is intended as a ready reference for EFA WEST remedial project managers (RPM) to use in evaluating alternative, "proven" technologies. Appendices, references, and Web site links provide additional information to facilitate the RPM's search and decision-making process.

The compendium is organized and cross-referenced for rapid access to the technology information of immediate interest. The table of contents lists available technologies, grouped by type, and tells where each technology summary is found. An applicability matrix shows which technologies are compatible with each contaminant-and-medium combination. A matrix of demonstrations sorted by installation shows which technologies have been demonstrated at each EFA WEST installation. Appendices include a list of contaminant types and draft EFA WEST guidelines on innovative technology selection.



The Soil Washing Pilot Plant demonstrated at Hunter's Point.

An electronic version of the compendium will soon be available on EFA WEST's Intranet and on TtEMI's network, in the public folders in Microsoft Exchange. The electronic version, an Adobe Acrobat PDF, features links to related documents, Web sites, and points of contact. The compendium will be updated as new technologies become available. To obtain more information or for assistance with the electronic version of the compendium, please call Ken Spielman at EFA WEST, (650) 244-2539, or Jon Kurth at TtEMI, (619) 718-9676.

Boundary Trenching Used at NCTS Stockton Landfill

By undertaking a boundary trenching investigation, the Naval Computer and

Mare Island Completes Its First FOST

The Mare Island team has completed its first finding of suitability to transfer (FOST) for Roosevelt Terrace. The 30-acre parcel, located just off the island in Vallejo, was used as a Navy housing complex and the City of Vallejo plans to redevelop Roosevelt Terrace into a 300-unit condominium complex as soon as the property is transferred. Early redevelopment will help the City fund infrastructure improvements that will make other areas at Mare Island more attractive for interim reuse and future redevelopment.

In order to transfer the property to the City of Vallejo, the Navy had to address the issues identified in the environmental baseline survey (EBS), including the possibility that transformers in the complex may have been the source of polychlorinated biphenyl (PCB) release to the environment. In partnership with the SSPORTS Environmental Detachment, TtEMI completed confirmation sampling for PCBs and prepared the confirmation sampling reports to address former transformer locations. Results of the confirmation sampling indicated no release of PCBs, and the confirmation sampling reports were used to reclassify the property as transferable under the Community Environmental Response Facilitation Act. Once an "Economic Development Conveyance" is signed, the Navy expects to immediately transfer the property to the City.

For more information, you may contact Bob Pender at EFA WEST (707) 562-3095, or Kelly Ryan at TtEMI, (415) 222-8339.

Telecommunications Station San Diego Detachment Stockton (NCTS Stockton) team was able to accurately define the limits of thirteen suspected land disposal areas, resulting in a potential cost avoidance of over $2 million in landfill capping costs.

NCTS Stockton consists of 1,459 acres, of which approximately 230 acres was designated as the landfill area. Between 1945 and 1979, about 1.5 million cubic yards of waste was deposited at various locations in this area. Based on aerial photographs, thirteen land disposal sites were identified within the landfill area, and the Navy anticipates capping these land disposal sites. To accurately determine the costs associated with capping of these sites, the Navy had to accurately define their extent.

During initial investigation activities at the thirteen sites, geophysical surveying

was used to determine where buried material was located. Geophysical surveying consisted of magnetic, electromagnetic, and radar surveys across the entire surface of each site. Based on the surveys, the total disposal area of the thirteen sites was determined to be about 40.5 acres.

To further define the limits of the landfill cell within each site, the Navy conducted boundary trenching. Boundary trenching was accomplished by excavating a trench perpendicular to each area where geophysical anomalies were identified until actual debris was encountered. Trenches were excavated approximately 100 feet apart until the entire cell boundary was defined.

As a result of the boundary trenching, the Navy discovered that subsurface material encountered at one site was not consistent with typical landfill material, and the area used for disposal at each of the other twelve sites was much smaller than originally estimated. The total cap area was reduced by more than 25 percent, from 40.5 acres (based on geophysical surveying) to 30.25 acres. As a result, the Navy has avoided a potential cost of over $2 million by investing $120,000 in this strategic investigation activity. For more information, contact Lang Huey at EFA WEST at (650) 244-2538, or Chris Fennessy at TtEMI at (916) 853-4510.

Did You Know?

Did you know that in 1775 Yerba Buena Island was originally named Isla de Alcatraces ("pelican island")? In 1826, an English cartographer mistakenly assigned the name to another nearby island, giving Alcatraz Island its name. The name Yerba Buena ("good herb") was later selected because of the mint-like herb growing wild on the island.

Lemoore Team Closes Out No-Action Sites

Twelve of the seventeen IR sites at Naval Air Station (NAS) Lemoore, California, have now been classified as no-action sites. This determination will allow the Navy to focus its efforts exclusively on the remaining five sites that may require remedial action (IR Sites 1, 5-9, 14, and 17), thereby accelerating the cleanup process.

The Navy has determined that the twelve sites require no action based upon the historical use of the sites, their intended reuse, and the results of site

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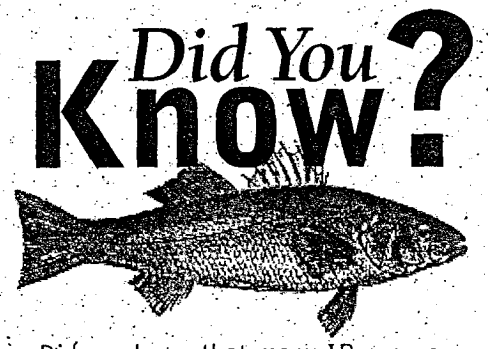
The actual operational history of the site helped the regulatory agencies understand that the analytical results were a true reflection of the site.

Lemoore Team *continued from p. 3*
remedial investigations. As of January 1999, no-action records of decision (ROD) had been signed for eight of the twelve sites, and draft RODs for the other four sites are now undergoing regulatory review. The determination that it is appropriate to move forward with the no action decision for the twelve sites is largely due to a series of negotiations that resulted in agreement among all parties on the land-use language, as well as the risk assessment results.

Over the past two years, the Navy has focused its efforts at NAS Lemoore on completing the investigation at sites deemed to require no action. As determined during interviews conducted in 1984 as part of the initial site assessments, many of the sites at NAS Lemoore were considered to be potentially contaminated based solely on personal recollections of past operating practices reported by former employees. The employees recounted activities that may have led to the release of contaminants to the surrounding soil and groundwater at some sites; however, in several instances, there was no evidence of any release. At Site 12, for example, it was suspected that the transformer in the building had been drained and that the transformer oil (which contained polychlorinated biphenyls (PCB)) was dumped on the bare soil outside the building. When TtEMI and the Navy thoroughly researched the site history, it was found that the transformer housed in the building had never been drained or changed. The remedial investigation revealed no PCB contamination in the soil or groundwater at Site 12. The actual operational history of the site helped the regulatory agencies understand that the analytical results were a true reflection of the site conditions and were not an indication that samples had been collected in the wrong locations.

At each site, the Navy and TtEMI collected and analyzed soil and groundwater samples for the chemicals suspected to be present at the site. Human health and ecological risk assessments were then conducted using the data collected. For all of the twelve no-action sites, the results of the risk assessments revealed no unacceptable risk to human health or the environment. For more information, contact Sherman Chao at EFA WEST (650) 244-2557, or Lorraine Alcott at TtEMI, (303) 312-8826.



Did you know that many IR program activities at NAWS China Lake are driven by the need to protect the Mohave Tui Chub, an endangered fish species, and its habitat? The chub population was relocated from the mountain springs to wastewater treatment seeps at the installation because groundwater levels dropped so low that the chub's natural habitat was drying out. The chub is thriving in its new location.

Point Molate RAB and EFA WEST Produce Community Bulletin Board

Visitors to Point Molate now have a new educational resource: a bulletin board that explains the history of the site and the environmental cleanup efforts at the former Naval Fuel Depot. The bulletin board is the result of a joint effort between the Navy and the community members of the Point Molate RAB to provide information for visitors to the site. The board features a historical timeline of the area, from the period when it was occupied by the Ohlone Indians to the present, and details the environmental activities currently underway. The board is located in an area that is accessible to the public and will be regularly updated to reflect the Navy's ongoing commitment to informing the community about environmental cleanup at Point Molate. For more information, contact Ina Shlez at TtEMI, (415) 222-8257.

R&M Nominated for Outstanding Achievements

With the endorsement and sponsorship of EFA WEST, Tetra Tech EM Inc. nominated its CLEAN II protégé firm, R&M Environmental and Infrastructure Engineering, Inc. (R&M), for the 1999 Nunn-Perry Award for outstanding

achievement under the Department of Defense (DoD) Mentor-Protégé Program. The Nunn-Perry Award was established by the DoD to recognize noteworthy accomplishments under the program and is based on three criteria: 1) quantitative program results, 2) quality of technical assistance, and 3) results of protégé development. In the nomination, TtEMI demonstrated that R&M has successfully expanded its technical expertise, increased its market and client base, and improved its internal cost accounting and management systems as a result of its participation in the DoD Mentor-Protégé Program. The DoD defines quantitative results as the return on DoD's investment in terms of value to the U.S. economy or to the growth of the protégé firm. TtEMI was able to show quantitative results in that R&M has experienced a growth in revenue equivalent to more than 50 times the investment in assistance.

DoD values its Mentor-Protégé Program as a means to "strengthen our country's economic foundation by providing jobs and sustaining economic growth." In endorsing the nomination, EFA WEST pointed to the significant growth R&M has achieved and stated that the TtEMI-R&M partnership provided "a good example of the benefits that can be derived from the Mentor-Protégé Program." For more information, contact Jason Brodersen at TtEMI, (415) 222-8225.

"Summit" Meetings Held for Four Installations

Senior management from EFA WEST, EPA, DTSC, and the RWQCB recently met with project teams from four Bay Area installations to directly address some of the tougher issues facing the project teams. These "issues resolution" meetings were designed to 1) clearly define the issues and their potential impacts, 2) prioritize the issues impeding progress toward cleanup completion, and 3) develop solutions acceptable to all parties. The installations involved were Mare Island, Treasure Island, Hunters Point Shipyard, and Alameda Point.

While not all issues were resolved at the meetings, the effort to define and prioritize the issues was an important first step to resolving them, and some of the installations now plan to hold similar meetings quarterly.

The following topics were discussed at issue resolution meetings for the following sites:

Mare Island	• DoD-State Memorandum of Agreement (DSMOA) funding • Regulatory support of the FFSRA schedule • Groundwater potability • Placement of fill as a potential CERCLA release • Greensand in utility trenches • Offshore unexploded ordnance • Ecological risk assessment
Treasure Island	• TPH soil and groundwater screening levels • Streamlining removal actions • Lead-based paint in soils • Risk assessments for future construction workers
Hunters Point Shipyard	• Cleanup depths and levels • Applicability of EPA's drinking water standards to groundwater • TPH screening and cleanup levels • Budget constraints • Evaluation of fish tissue • Upland sediment disposal alternatives
Alameda Point	• Property transfer schedules • Marsh crust agreement • Human health risk assessment • Institutional controls • Team effectiveness

For more information, you may contact Hank Gee at EFA WEST, (650) 244-2570, or Stacey Lupton at TtEMI, (415) 222-8245.

HPS Parcel A: First Federal Facility Property Proposed for NPL Delisting

On December 10, 1998, Hunters Point Shipyard became the first federal facility on the National Priorities List (NPL) to have property proposed for delisting from the NPL. The proposed delisting applies to Parcel A, an 88-acre area that has been used primarily for residential purposes, that the City of San Francisco also plans to use as a residential area. The delisting of Parcel A from the NPL will facilitate the City's ability to finance the reuse of the property.

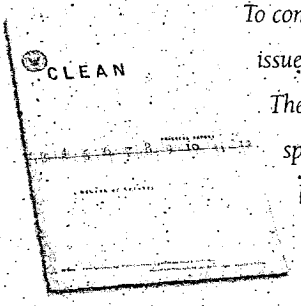
El Niño Affects Point Mugu

Last year's El Niño storms wreaked havoc with Naval Air Weapons Systems (NAWS) Point Mugu's sewage system. The large volume of storm water and sewage effluents released during each storm meant that the Oxnard Wastewater Treatment Plant could not accept effluent from NAWS Point Mugu, forcing the installation to use the extreme emergency storage system approved by the Los Angeles Region Regional Water Quality Control Board (LARWQCB). The NAWS Point Mugu wastewater emergency system commingles sewage with storm water runoff, releasing the combined stream into a storage pond. Although the emergency system had been approved by LARWQB, they issued a cleanup and abatement order, requiring the Navy to conduct a groundwater/surface water investigation beneath the holding pond due to their concerns that the wastewater may have adversely been impacting the ground and surface water.

The Point Mugu team's knowledge about the site conditions enabled them to complete the work and submit the report to the LARWQB on schedule and $50,000 under budget.

The Point Mugu team had to conduct the study and submit the report in a very short time frame—less than 3 months. The work involved drilling wells, sampling groundwater and surface water, and conducting a tidal influence study at the new wells surrounding the ponds. The resulting analytical data were used in ecological screening for potential impacts to surrounding surface water and terrestrial habitats, as well as in evaluating groundwater-to-surface water interaction and gradients, and in determining the nature and extent of potential contaminants. Results indicated that the effluent appeared to have little impact on groundwater or ecological receptors, and the Navy has improved the emergency storage system by reducing the size of the pond and by sealing the pond with a liner. In addition, the Navy also restored the surrounding areas to the original marshland habitat. The Point Mugu team's knowledge about the site conditions enabled them to complete the work and submit the report to the LARWQB on schedule and $50,000 under budget. For more information, call Katy Norris at (406) 442-5588.

CLEAN 10 Year Progress Report Available!



To commemorate ten years of CLEAN contracts, an anniversary issue of the CLEAN annual report has recently been completed. The CLEAN Progress Report, A Decade of Success, *is a specially-designed retrospective of the last ten years and highlights key challenges, achievements and progress made in the CLEAN program.*

The report is available electronically as a PDF file, or you may obtain a hard copy of the report by calling Al Fung at EFA WEST, (650) 244-2517.

CLEANTIPS is published four times a year by TetraTech EM, Inc. as part of the CLEAN program. Story suggestions and comments may be sent to the following address:

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